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Discussions
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Interactive comment on "Worldwide lake level trends and responses to background climate variation" *by* Benjamin M. Kraemer et al.

Anonymous Referee #2

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Page 2, Ln 25-27: Please double check this calculation. The total area of the eight East Africa Great Lakes is $\sim$ 152410 kmˆ2. The water volume increase associated with 1 meter of water level increase is $\sim$ 152 kmˆ3.

Page 4, Ln 34: "Collinear" is a too strong word here. I would use "correlated".

Page 5, Ln 30-32: Altimeter observed water level changes for global major lakes are also available from the CNES Hydroweb (http://hydroweb.theia-land.fr/). There are notably large differences between the G-REALM and Hydroweb solutions. The G-REALM solutions appear to show larger biases (based on preliminary comparisons in Caspian Sea and Lake Victoria). This is not to ask the authors to redo the analysis using the Hydroweb solutions, but to remind them the potential issues with the G-REALM solutions.

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It will be helpful to show a distribution map of the 117 lakes. The current Figure 3 does not really suit the purpose.

Page 6, Ln 6: water level altimetry -> altimetry water level observations

Page 6, Ln 29-33: The authors claimed that they calculated a complete correlation matrix between each PC and all of the 37 major climate indices recognized by NOAA's Earth System Research Laboratory. Some of the indices (e.g., EA/WR and TPI/IPO) from the ESRL (https://www.esrl.noaa.gov/psd/data/climateindices/list/) do not cover the recent time spans. How did the authors deal with those indices?

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